



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,811	12/19/2000	Craig B. Greenberg	034560-049	7313

7590 06/13/2006  
ROBERT E. KREBS  
THELEN REID & PRIEST LLP  
P.O. BOX 640640  
SAN JOSE, CA 95164-0640

EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT	PAPER NUMBER
----------	--------------

2616

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

4

<b>Office Action Summary</b>	Application No. 09/742,811	Applicant(s) GREENBERG, CRAIG B.	
	Examiner Andrew C. Lee	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 17-19 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 17 and 19 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
  - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☐ All    b) ☐ Some \* c) ☐ None of:
      - 1. ☐ Certified copies of the priority documents have been received.
      - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamenno et al. (US 6282234 B1) in view of Schmidl (US 6816541 B1).

Regarding claim 1, Kamenno et al. disclose the limitation of a method to demodulate a signal comprising receiving modulated data by an antenna (recited “a radio section for detecting spread spectrum input signals and converting them to baseband signals” as to demodulate a signal comprising receiving modulated data by an antenna; Fig. 1, element 11 as antenna, elements 14 – 1 DLL, column 2, lines 47 – 54); configuring a first datapath from several predefined configurations to receive the modulated data from the antenna, where the configuration selected for the first datapath corresponds to a protocol of the received modulated data (recited “searches the baseband signal, and detects a peak position in each path. Based on the detected timing relations, code generators in DLL sections and corresponding to each path” as a first datapath from several predefined configurations to receive the modulated data from the antenna, where the configuration selected for the first datapath corresponds to a protocol of the received modulated data; column 6, lines 2 – 14, Fig. 3); configuraing a second datapath (Fig. 4, “elements 16-2, 17-2 path data 2” as second datapath) from the several predefined configurations to receive the modulated data from the antenna, wherein the configuration selected for the

Art Unit: 2616

second datapath corresponds to a protocol of the received modulated data (recited “searches the baseband signal, and detects a peak position in each path. Based on the detected timing relations, code generators in DLL sections and corresponding to each path” as a second datapath from several predefined configurations to receive the modulated data from the antenna, where the configuration selected for the second datapath corresponds to a protocol of the received modulated data; column 6, lines 2 – 14, Fig. 3); and operating the first (Fig. 4, “elements 16-1, 17-1 path data 1” as first datapath) and second datapaths (Fig. 4, “elements 16-2, 17-2 path data 2” as second datapath) in parallel to demodulate the received modulated data (Fig. 3, elements 14-1 and 16- 1 as first datapath, 14-2 and 16-2 for the second datapaths and in parallel operating the first and second datapaths; column 6, lines 1 – 18). ); Kameno et al. do not disclose explicitly operating the first and second datapaths in parallel to demodulate the received modulated data of multiple users. Schmidl discloses the limitation of operating the first and second datapaths in parallel to demodulate the received modulated data of multiple users (recited “uses the conventional RAKE receiver to demodulate all the users in the cell” as operating the first and second datapaths in parallel to demodulate the received modulated data of multiple users; Fig. 5, column 6, lines 42 – 53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kameno et al. to include operating the first and second datapaths in parallel to demodulate the received modulated data of multiple users such as that taught by Schmidl in order to provide a spread spectrum system with interference cancellation employing a hybrid of sequential and parallel interference cancellation (as suggested by Schmidl, see column 2, lines 23 – 25).

Regarding claims 3, 19, Kameno et al. disclose the limitation of the method of claimed further including using a first output buffer (Fig. 8, element 16-1) coupled to the first datapath (Fig. 8, elements 14-1) and a second output buffer (Fig. 8, element 16-2) coupled to the second datapath (Fig. 8, element 14-2) to store data for the multiple users (recited “buffer sections 16-1, 16-2, for storing and holding the path data from the DLL 14-1, 14-2” as a first output buffer coupled to the first datapath and a second output buffer coupled to the second datapath; Fig. 8, column 9, lines 26 – 33).

3. Claims 2, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameno et al. (US 6282234 B1) and Schmidl (US 6816541 B1) as applied to claims 1, 3, 19 above, and further in view of Uesugi (US 6704345 B1).

Regarding claim 2, Kameno et al. disclose the limitation of the method of claimed wherein configuring the first datapath further includes using first controller (Fig. 7, element 34 Read signal control section as first controller) to provide the configuration selected for the first datapath (recited “searches the baseband signal, and detects a peak position in each path. Based on the detected timing relations, code generators in DLL sections and corresponding to each path” as a second datapath from several predefined configurations to receive the modulated data from the antenna, where the configuration selected for the second datapath corresponds to a protocol of the received modulated data; column 6, lines 2 – 14, Fig. 3). Kameno et al. do not disclose expressly configuring the second datapath includes using a second controller to provide the configuration selected for the second datapath. Uesugi discloses the limitation of configuring

Art Unit: 2616

the second datapath includes using a second controller to provide the configuration selected for the second datapath (Fig. 11, elements 1008, 1009; element 1008 as first control and 1009 as second control; recited “the central frequency of the signal is changed by sweep circuit according to a second sweep pattern which is different from the other created by frequency change controller 1009” a second controller to configure the second datapath to operate in parallel with the first datapath; column 16, lines 45 – 51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kamen et al. to include configuring the second datapath includes using a second controller to provide the configuration selected for the second datapath such as that taught by Uesugi in order to provide a transmission/reception apparatus and method capable of eliminating waste time for accurate finger detection during RAKE reception etc., (see Uesugi, column 3, lines 32 – 43).

Regarding claim 17, Kamen et al. disclose the limitation of a system for demodulating signals (recited “a radio section for detecting spread spectrum input signals and converting them to baseband signals” as to demodulate a signal comprising receiving modulated data by an antenna; Fig. 3, element 11 as antenna, elements 14 – 1 DLL, column 2, lines 47 – 54); comprising: an antenna (Fig.3, element 11 as antenna); first and second datapath coupled to the antenna (Fig.3, elements 14-1 as first datapath and element 14-2 as second datapath; column 6, lines 2 – 24); and a first controller (Fig. 7, element 34 Read signal control section as first controller) to select protocol and configure the first datapath to accept modulated data from the antenna and provide demodulated data in accordance with the protocol (recited “searches the baseband signal, and detects a peak position in each path. Based on the detected timing relations,

Art Unit: 2616

code generators in DLL sections and corresponding to each path” as a second datapath from several predefined configurations to receive the modulated data from the antenna, where the configuration selected for the second datapath corresponds to a protocol of the received modulated data; column 6, lines 2 – 14, Fig. 3). However, Kamenno et al. and Schmidl do not disclose explicitly a second controller to configure the second datapath to operate in parallel with the first datapath. Uesugi discloses the limitation of a second controller to configure the second datapath to operate in parallel with the first datapath (Fig. 11, elements 1008, 1009; element 1008 as first control and 1009 as second control; recited “the central frequency of the signal is changed by sweep circuit according to a second sweep pattern which is different from the other created by frequency change controller 1009” a second controller to configure the second datapath to operate in parallel with the first datapath; column 16, lines 45 – 51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kamenno et al. and Schmidl to include a second controller to configure the second datapath to operate in parallel with the first datapath such as that taught by Uesugi in order to provide a transmission/reception apparatus and method capable of eliminating waste time for accurate finger detection during RAKE reception etc., (see Uesugi, column 3, lines 32 – 43).

*Allowable Subject Matter*

4. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

5. Applicant's arguments filed 3/20/2006 with respect to claims 1, 2, 3, 17, 18, 19 have been fully considered but they are not persuasive.

*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL

June 06, 2006

  
RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER